

MONTANA DEPARTMENT OF AGRICULTURE  
AGRICULTURAL SCIENCES DIVISION  
TECHNICAL SERVICES BUREAU  
HELENA, MT 59620

BROADCAST USE OF ZINC PHOSPHIDE FOR CONTROL OF THE RICHARDSON  
GROUND SQUIRREL ON RANGELAND, PASTURE AND CEREAL CROPS

Zinc Phosphide Rodent Bait AG, manufactured by Bell Labs, Inc. is permitted to be broadcast in Montana for control of Richardson Ground Squirrel using two labels. The [federal label](#) (EPA Reg. No. 12455-102) was amended in 2008 to allow broadcast use in cereal grains and alfalfa. A [Special Local Need label](#), also known as a 24(c) registration, (SLN No. MT-890009) has been in place since 1989 and provides use directions for broadcast to non-crop areas and rangeland.

Pre-baiting

- Pre-baiting has been shown to increase acceptance of the toxic bait by the target ground squirrel species. The pre-bait is an oat grain that has been slightly crimped and heated so that it will not germinate. It should be very similar to the oat used in the formulated product. There are at least two in-state suppliers of the pre-bait.
- Broadcast up to 6 pounds of nontoxic oats per swath acre (net 3 pounds per acre) 2 to 3 days prior to applying toxic bait. Do not apply bait unless tests with untreated oats show good acceptance of grains by ground squirrels in the areas to be treated.

Broadcast application recommendations

- Broadcast this product only after all ground squirrels have emerged from hibernation. This usually occurs within two weeks of first appearance of ground squirrels. The entire breeding population, including females, should be actively foraging at the time of application to obtain maximum efficacy.
- Ground squirrels readily travel up to 100 ft when foraging, therefore, a continuous bait application is not necessary. Apply bait application in swaths alternating with 20 ft to 100 ft swaths of no bait application. This technique will provide efficacious treatment while reducing cost of bait application and reduce the amount of residual bait present post-treatment.
- Apply bait at 6 pounds per swath acre (net 3 pounds per acre) in alternate treated and untreated swath widths. Bait only areas where ground squirrel burrows and active ground squirrels are present.
- Use flaggers or GPS units to insure proper swath width spacing and to broadcast bait on the same swaths that were pre-baited.
- Do not mix or apply rodent bait with fertilizers or other products.

- Clean broadcast equipment prior to use for broadcasting rodent bait. Residual chemical dust or odor could adversely affect bait acceptance by rodents.
- Use a constant application speed when calibrating and broadcasting to prevent over or under application. Recalibrate if a different application speed is desired.
- Do not apply pre-bait or bait in snowy, or wet weather conditions or if these conditions are expected shortly (24-48 hours) after application. Inclement weather reduces squirrel activity and zinc phosphide bait becomes less acceptable to squirrels after exposure to moisture.
- Keep human activity to a minimum for several days after pre-bait and bait application to insure that rodents have undisturbed feeding access to the bait.
- Reduce the rate of reinvasion from squirrels occupying areas immediately adjacent to the treated area by treating a buffer area of 50 to 100 yards, if possible.

#### Precautionary non-target statements

- Do not broadcast bait in areas where waterfowl, pheasants, partridge, grouse or other seed-eating birds congregate or feed. Use other recommended management methods or appropriate registered rodenticides if rodent control is necessary in these areas.
- Remove livestock from the area to be baited to reduce trampling of the bait and potential hazards to livestock.
- Removal or burying of dead carcasses seen above ground is a best management practice for this product. Relative to other rodenticides, zinc phosphide has reduced secondary poisoning effects to non-target species, but may still have an impact. Removal of carcasses further reduces the likelihood of secondary effects.

#### For more information:

Montana Special Local Need, 24(c), label for broadcast in rangeland and non-crop areas:  
[http://agr.mt.gov/pestfert/24\(c\)%20Labels/MT-89-0009%20zp%20rodent%20bait%20ag.pdf](http://agr.mt.gov/pestfert/24(c)%20Labels/MT-89-0009%20zp%20rodent%20bait%20ag.pdf)

Bell Labs ZP Rodent Oat Bait Ag label:  
[http://agr.mt.gov/weedpest/pdf/VertBulletins/federalLabel\\_102-ZP\\_Oats2-08.pdf](http://agr.mt.gov/weedpest/pdf/VertBulletins/federalLabel_102-ZP_Oats2-08.pdf)

Cyclone Seeder Calibration Information Bulletin:  
[http://agr.mt.gov/weedpest/pdf/vertbulletins/cyclone\\_calibr\\_for\\_zp.pdf](http://agr.mt.gov/weedpest/pdf/vertbulletins/cyclone_calibr_for_zp.pdf)

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